

12. PRICES

Methodological notes

Price indices in production branch express the rate of production price changes of domestic producers realized on domestic market and in industry of goods for export too, respectively in total for domestic and export.

Within the harmonization with EU statistics was created a model of price indices of industrial products, realized in export by analogy of models of price indices on the domestic market. The weights structure of domestic price indices and export price indices is projected into weight pattern for calculation of total industrial producers price indices.

The total revision of industrial producers price indices was accomplished during the year 2016. Weight scheme, sampling of price items and reporting units for domestic market, and also parallel for export, were revised. Since 2017 the price basic period has been changed to December 2015 = 100.

In 2022 the scheme of **industrial producers price index** contains app. 3 700 representative items (products) of domestic serial industrial production respectively further 3 600 products for export classified into divisions 05 to 39 of the revised European Classification of Economic Activities (NACE Rev. 2). Constant weights derived from the structure of industrial receipts for year 2015 are used for the aggregation of individual products indices into higher classification levels. The calculation of index of industrial producers prices has also covered the observation of drinking and drainage water prices.

Products prices are surveyed for selected industrial producers on “primary market” i.e. during first market transaction between producer and customer. Prices do not comprise value added tax and excise duty.

Price index of raw wood covers 16 selected products (representative items) of leafy and coniferous raw wood assortments (division 02 – CPA 2015). The index is calculated by using of constant weights derived from the sale structure in 2015. This index is published with 2015 average = 100 as a base. Prices of selected assortments of coniferous and leafy wood (excluding value added tax) are surveyed for selected more important producers.

The **price index of agricultural products** contains information on price level development for 85 main agricultural products (crop, livestock, fruit, vegetables) and fish classified in divisions 01 and 03 CPA 2015. Indices are calculated from surveyed prices of production assigned for further processing or sale. Calculation of aggregates is based on constant weighting system derived from the average structure of agricultural production sales for years 2014 – 2016. Prices of individual months of 2015 are the basis for price index calculation. The prices of agricultural products are surveyed in selected producers during the sale to a first customer (i.e. primary market) without value added tax.

Data on average prices of selected agricultural products are the average for selected qualities (without a non-standard) for crops and animal products and in fruit and vegetables for 1st quality.

The scheme of **price indices of construction works** is compiled from app. 8 558 representative items – selected items of construction works (divisions 41 to 43 – CPA 2015). Weights system reflects the structure of construction production in 2015. The price base is average of 2015. Selected construction suppliers grant the prices for representative items without value added tax. Price of construction work per one measuring unit includes all costs needed to build a construction, i.e. materials, semi-finished goods, costs of the operation of construction machines, costs of

transport, indirect costs (except equipment in the construction site) and profit. Indices are published according Classification of Products by Activity (CPA 2015) and Classification types of Construction (CC). Total price index of construction work consists of the price index of new construction and of the price index of repair and maintenance.

The price indices of supplies of goods and services to agriculture and the price indices of materials and components used in construction express the rate of price changes on input side.

The price index of supplies of goods and services into agriculture includes products and services purchased by agricultural producers and consumed by agricultural production. It is calculated from surveyed prices of 101 kinds of important purchased products and services (selection of respondents is identical with the selection for the price index of agricultural products) and from price indices of selected groups, or CPA 2015 classes, taken from industrial producers price index, construction works price index and the price index of communication performances. The index is published with 2015 average = 100 as a base. Value added tax is excluded from the purchase prices of products.

The price index of (production) materials and components consumed in construction contains price indices for selected materials and products (95 groups of CPA 2015) taken from price index of domestic industrial producers. The weights for index calculation were derived from the value of consumed construction materials in construction process in 2015. The base period is average of 2015.

The indices of consumer prices and living costs are calculated from the prices of individual representative items collected from the network of selected shops and service business. The base period for calculating of consumer prices indices is December 2000.

Since January 2022, the development of consumer price indices in accordance with the national methodology was surveyed on universal consumer basket established on the set of 738 representative items – selected goods and services paid by the population. Updated consumer basket was discussed and consented by the representatives of the statistical bodies, ministries and other institutions.

Consumer price index of goods and services (cost of living index) for households in total presents the price development on a generally average level. Consumer price indices (living costs indices) are calculated also for selected types of social groups of households – employees, pensioners and for group of low-income households. The coverage of representative items in the consumer price indices as well as in cost of living indices is the same only weights are different. Representatives of consumer basket are updated annually. Consumer basket is divided by COICOP Classification (Classification of Individual Consumption by Purpose) used by the countries of the European Union. Consumer basket is divided into 12 divisions and 44 groups of COICOP Classification.

Since January 2005 the consumer price index (based on December 2000) is calculated by chaining using December of a previous year as a linking period. Weights for the elementary aggregates have to be annually updated to ensure that they reflect current expenditure sample and consumer behaviour. The important feature of a chain index formula is that it allows weights to be annually updated and facilitates the introduction of new items and the removal of obsolete ones or those on which population spend minimal expenses.

In order to be able to link the old and the new series, an overlapping (link) period is needed for calculation of the chain index in which the index has to be calculated using both the old and the new set of weights. A month or year can be the link period. The Statistical Office of the SR stated as a link period December of a previous year, i.e. December 2021 is a link period for the compilation of indices in the year 2022. December 2021 is a last period, for which the index is calculated

using the previous consumer basket and system of weights and at the same time is the price reference period for an updated consumer basket and new system of weights. Thus, December of a previous year is a link period between the new and the old index and these indices create (compile) a chain index.

The disadvantage of a chain index is that chaining leads to non-additivity. When the new series is chained onto the old, the higher level indices after the link cannot be obtained as weighted arithmetic averages of individual indices using the new weights.

Average consumer prices of selected products refer to average prices for the SR calculated from the prices surveyed in selected shops and service business.

Core and net inflation quantifies growth rate of price level on incomplete consumer basket. From the consumer basket there are excluded those items with regulated prices and items with prices influenced by other administrative measurements. The items which will be changed due to tax amendments (e.g. changes of VAT, excise taxes) stay a part of consumer basket, but influence of tax amendments is eliminated. Total inflation is divided into core inflation (influence of items with market prices), influence of items with regulated prices and influence of indirect duties (elimination of tax amendments). Contribution of core inflation represents the information by how much percentage should the price level be changed, if there is no price change due to administrative interference. It means that if there are no changes of administrative prices, contribution of core inflation is equal with total inflation. Contribution of core inflation (in percentual points) to total inflation is further divided into contribution of net inflation and contribution of foodstuff prices. Reason for putting aside share of foodstuff from net inflation was the fact that foodstuff prices in the past were determined by considerable seasonality as well as governmental non-market measurements (e.g. changes of guaranteed prices for the first producers, subsidies, import taxes, quotas).

Harmonized Indices of Consumer Prices (HICP) have been set up with an aim to ensure a comparability of consumer price indices of individual countries within the European Union. The average annual inflation rate, measured by the harmonized index of consumer prices, is also used as a price stability criterion. This criterion is one of the four convergence (Maastricht) criteria that EU countries have to fulfil in order to achieve the third stage of economic and monetary union (EMU), i.e. the stage with the common currency, the Euro. The price stability criterion concerns the average inflation rate over the last 12 months (measured by the HICP) that does not exceed the average of the three best-performing EU countries in terms of price stability by more than 1.5 percentage point.

HICP of all European Union member states are the basis for the compilation of harmonized index of consumer prices for EU. HICP of those Member States, which became members of euro area, form a basis for monthly compilation of harmonized index for euro area. The entry to the Monetary Union – third stage of EMU is being carried out gradually. At present, the Euro area includes 19 member states of the EU.

In the year 2022, the HICP consumer basket was established on the set of 729 representative items (some of the items related to the Owner Occupied Housing are at present excluded from HICP coverage). The index reference period for Harmonized Indices of consumer prices index is average of the year 2015. The harmonized index based on index reference period is calculated by chaining – linking period is December of a previous year. Weights for the elementary aggregates are annually revised to ensure that they reflect current expenditure patterns and consumer behaviour. HICP weights are prices updated to December of the previous year. Consumer basket is broken down by the categories of European Classification of Individual Consumption according to Purpose (ECOICOP).

Definitions

The price indices are created as sample indices of constant structure (influence of structure change onto price index level is excluded). Summary indices are calculated by aggregation of individual simple price indices of representative items by convenient weights system, i.e. structure of receipts from sales of products (expenditure of households for goods and services) in the basic year. The index schemes (system of weights, representative items and respondents systems) are regularly (5-years interval) revaluated and adapted to actual structures. Since 2017 price indices of producers has been calculated against December 2015 or average of 2015. For calculation of price indices is used Laspeyres formula.

Producers price refers to contract price agreed between producer and domestic customer invoiced for more important business transaction realized in the middle of current month excluding value added tax and excise duty and costs for transport to purchaser and costs related to transport.

Export value is contract price agreed between producer and foreign customer according to the qualitatively agreed conditions, terms of payments and delivery conditions. Invoiced price to customer is presented without value added tax and excise duty.

Consumer price is contract price agreed between seller and final consumer. It includes producer price, price of business performance (wholesale or retail trade margin), value added tax and other duties (e.g. excise duty).

Source

All published data are the result of regular surveys and processing realized by the Statistical Office of the SR.

The state statistical questionnaires submitted by selected reporting units are data source for calculation of price indices in production branch. Prices of raw wood are provided to the Statistical Office of the SR from departmental surveys by the Ministry of Agriculture and Rural Development of the SR.

Consumer prices of goods and services for calculation of average prices and indices of consumer prices are surveyed in selected shops and service business in the Slovak Republic.

More detailed information can be found on the Statistical Office of the SR website in the section Macroeconomic statistics – Consumer prices and prices of production statistics and in the public database of the Statistical Office of the SR DATAcube.